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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SCHLAIFER, JONATHAN D

ART UNIT

PAPER NUMBER

2178

DATE MAILED: 10/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/357,841

Applicant(s)

OTSUBO, MOTOHIDE

Examiner

Jonathan D. Schlaifer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/21/99; IDS 10/12/99, 4/14/00, 2/21/01.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/21/1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 7, 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to application 09/357,841 filed on 07/21/1999, with prior art filed on 10/12/1999, 4/14/2000, and 2/21/2001.
2. Claims 1-18 are pending in the case. Claims 1 and 2 are independent claims.

Drawings

3. The drawings are objected to because of erasures, alterations, overwritings, interlineations, folds, copy machine marks not accepted on all sheets, and lines numbers and letters not uniformly thick and well defined, clean, durable, and black (poor line quality), figs. 1-31C. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: A Method of Searching for and Retrieving Information from Structured Documents.

5. The disclosure is objected to because of the following informalities: On line 13 of page 1, "Paten" should be "Patent" On line 24 of page 3, "Tag is" should be "Tags are". On line 16 of page 14, "Titel" should be "Title".

Appropriate correction is required.

Claim Objections

6. Claim 1 objected to because of the following informalities: In line 1 of the claim, "structures" should be "structured". Also, on line 8 of the claim, "while

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relationship” should be “while the relationship”. Appropriate correction is required.

7. Claim 6 objected to because of the following informalities: In line 2 of the claim, “or” should be “of”. Appropriate correction is required.
8. Claim 18 objected to because of the following informalities: In line 2 of the claim, “another” should be followed by “set of”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 2 recites the limitation "the document" in steps b and c. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination, the claim will be treated as if it read “the documents”.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. **Claims 1 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Catapult, Inc. (“Microsoft Word 97: Step by Step”, 1997) further in view of Jaakkola, et al. (“sgrep – search a file for a structured pattern”), hereinafter Jaakola**

11. **Regarding independent claim 1**, Catapult, Inc., on pages 197-198 of the book, discloses Microsoft Word 97's capability to simultaneously acquire and edit multiple structured documents (Microsoft Word documents are inherently structured documents). This capability constitutes a method of editing a plurality of structured documents, comprising the step of acquiring a plurality of structured documents in a document edit system. However, Catapult, Inc. fails to disclose extracting a plurality of elements in each of said plurality of structured documents using an element edit statement which indicates element to be extracted, wherein the elements are extracted while the relationship of the elements extracted is maintained. However, on page 4 of the document, Jaakkola discloses that sgrep, a structured document search utility may process multiple documents, and on page 10, shows examples of the usage of sgrep which indicate that it can be used in a flexible manner that using an element edit statement which indicates element to be extracted, wherein the elements are extracted while the relationship of the elements extracted is maintained in order to search and filter material in documents in order to retrieve information in an easy and flexible manner. It would have been obvious to one of ordinary skill in the art at the time of the invention to use sgrep in combination with Microsoft Word in order to search and filter material in documents in order to retrieve information in an easy and flexible manner.

12. **Regarding dependent claim 17**, Catapult, Inc., on page 89, shows that the Find feature in Word is designed to respond to multiple user requests. It was notoriously well known at the time of the invention that users often needed to find

and retrieve multiple requests to serve multiple search needs. It would have been obvious to one of ordinary skill in the art at the time of the invention to allow for multiple requests, thereby acquiring another element edit statement into said document edit system, said another element edit statement being used to edit the elements which have been extracted to serve multiple search needs.

13. **Regarding dependent claim 18**, it was notoriously well known at the time of the invention that a word processor's search feature would initialize variables relevant to follow-up searches in order to allow the word processor to operate. It would have been obvious to one of ordinary skill in the art at the time of the invention to follow common word processing practice and arrive at a method wherein said another element edit statement comprises another set of document editing instructions which are used for initializing a plurality of variables providing for editing the elements extracted, pre-editing, post-editing, and arranging the elements extracted in order to allow the word processor to operate.
14. **Claims 2-3 and 5-6 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Catapult, Inc. further in view of Microsoft Corporation ("User's Guide: Microsoft Word", Version 6.0, 1993-1994) further in view of Jaakkola further in view of Hahn ("Harley Hahn's Student Guide to Unix", WCB/McGraw-Hill, 1996)**
15. **Regarding independent claim 2**, Catapult, Inc., on pages 197-198 of the book, discloses Microsoft Word 97's capability to simultaneously acquire and edit multiple structured documents (Microsoft Word documents are inherently structured documents). This capability constitutes a method of editing a plurality

of structured documents, comprising the step of acquiring a plurality of structured documents in a document edit system. Catapult, Inc. further discloses acquiring an element edit statement into said document edit system, said element statement comprising a plurality of edit instructions for searching at least one element in the documents on page 89 in the description of how a search string is entered in the find and replace box. Catapult, Inc. fails to disclose defining an element search portion in the documents and implementing match operations between an element defined in said element edit statement and each of the elements in said element search portion, and ascertaining an element which matches the element defined in said element edit statement, the matched element being extracted if the matched element is indicated as being extracted, the extracted element being stored in an edit result storage, and said match operations being repeated until completing all the edit instructions in the element edit statement. However, Microsoft Corporation at the bottom of page 59 discloses that the user may select the portion of a document to search in order to control the search. It would have been obvious to one of ordinary skill in the art at the time of the invention to define an element search portion in the documents in the manner of Microsoft Corporation in order to control the search. Also, Jaakkola discloses on page 1 that `sgrep` inherently involves implementing match operations between an element defined in said element edit statement and each of the elements in said element search portion, and ascertaining an element which matches the element defined in said element edit statement, the matched element being extracted if the matched element is indicated as being extracted and repeating said match operations until

completing all the edit instructions in the element edit statement (it performs a search function based upon an element edit statement) in order to effectively search and filter files. It would have been obvious to one of ordinary skill in the art at the time of the invention to perform a search in the manner of Jaakkola in order to effectively search and filter files. Hahn reveals on pages 316-317 that it is common practice in computation to redirect useful information into a file for further processing. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the extracted element be stored in an edit result storage after the teachings of Hahn.

16. **Regarding dependent claim 3**, Catapult, Inc., on pages 191-192, describes Microsoft Word's capability to edit multiple documents on a document-by-document basis.
17. **Regarding dependent claim 5**, Jaakkola on page 5 notes that a region expression may be delimited by parentheses, and this constitutes a method wherein said element edit statement contains a tag which is delimited using two selected characters, said tag being used to define an element which is an identified element in the element search portion of the document.
18. **Regarding dependent claim 6**, Jaakola on page 5 indicates that basic expressions, which are the main constituents of searches, may contain phrases. Hence, this constitutes a method wherein said element edit statement contains a character pattern consisting of normal text characters in sequence.
19. **Regarding dependent claim 11**, Jaakkola reveals from the way expressions are built up on page 5 that successive regions are recognized successively. Hence,

sgrep as portrayed by Jaakkola would behave as if it had a hierarchy connector defined by inserting no character between first and second element-defining names, said hierarchy connector being used to determine if an element defined by said first element-defining name involves an element defined by said second element-defining name when used upon a structured document.

20. **Regarding dependent claim 12**, Jaakkola discloses on page 5 that in sgrep, the element edit statement contains parentheses involving a plurality of element-defining names that are preferentially processed.
21. **Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Catapult, Inc. further in view of Microsoft Corporation further in view of Jaakkola further in view of Hahn further in view of Hikida (USPN 5,737,737—filing date 5/19/1993)**
22. **Regarding multiply dependent claim 4**, Catapult, Inc., Microsoft Corporation, Jaakkola, and Hahn fail to disclose a method wherein the elements stored in said edit result storage are further edited before being retrieved from said document edit system. However, Hikida, in col. 37, lines 8-17, discloses that edit processing is an option following a search in order to help process the results of the search. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Hikida about processing search results to develop a method wherein the elements stored in said edit result storage are further edited before being retrieved from said document edit system in order to help process the results of the search.

23. Claims 7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Catapult, Inc. further in view of Microsoft Corporation further in view of Jaakkola further in view of Hahn further in view of Parry (USPN 6,077,085—filing date 5/19/1998)

24. Regarding dependent claim 7, Jaakkola discloses, on page 10, a syntax for a wild card tag which is two periods in sequence between identifying blocks delimited by two braces, which are two selected characters. This constitutes a method wherein said element edit statement contains a wild card tag delimited using two selected characters, said wild card tag being used to determine structured layers in the element search portion of the document. However, Catapult, Inc., Microsoft Corporation, Jaakkola and Hahn fail to disclose that the wild card tag is a single character. However, Parry in col. 7, lines 43-55 shows the use of the single character '*' as a wild card in order to compactly represent a wild card in a search string. It would have been obvious to one of ordinary skill in the art at the time of the invention to use Parry's teachings about the use of the asterisk to represent a wildcard with one character in order to compactly represent a wild card in a search string.

25. Regarding dependent claim 9, Jaakkola discloses on page 10 the use of "containing" as an extraction indicator accompanying a character sequence, said extraction indicator being used to extract an element from the element search portion of the document if said character sequence matches the element in the element search portion. However, Catapult, Inc., Microsoft Corporation, Jaakkola and Hahn fail to disclose that the wild card tag is a single character. However,

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Parry in col. 7, lines 43-55 shows the use of the single character '*' as a wild card in order to compactly represent a search operator in a search string. It would have been obvious to one of ordinary skill in the art at the time of the invention to use Parry's teachings about compact representation of search operators to represent "containing" with an arbitrary character in order to compactly represent a search operator in a search string.

26. **Regarding dependent claim 10**, Jaakkola discloses on page 10 the use of ".." as a sequence connector, said sequence connector accompanying two element-defining names at both sides of said sequence connector, said sequence connector specifying, in the element search portion, two elements positioned in the same order of said two element-defining names. However, Catapult, Inc., Microsoft Corporation, Jaakkola and Hahn fail to disclose that the wild card tag is a single character. However, Parry in col. 7, lines 43-55 shows the use of the single character '*' as a wild card in order to compactly represent an operator in a search string. It would have been obvious to one of ordinary skill in the art at the time of the invention to use Parry's teachings about compact representation of search operators to represent ".." with an arbitrary character in order to compactly represent an operator in a search string.

27. **Claims 8 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Catapult, Inc. further in view of Microsoft Corporation further in view of Jaakkola further in view of Hahn further in view of Costales ("C from A to Z", 1985)**

28. **Regarding dependent claim 8**, Jaakkola discloses on page 10 that one may use “not containing” as part of a search string as a negation indicator that accompanies an element-defining name, said negation indicator being used to define an element wherein an element match is not established with a character sequence immediately following said negation indication (“not containing indicates what to avoid). However, Catapult, Inc., Microsoft Corporation, Jaakkola and Hahn fail to disclose that the negation indicator is a single character. However, Costales, on page 41, indicates that the minus sign (-) is used in the C language to indicate negation compactly. It would have been obvious to one of ordinary skill in the art at the time of the invention to denote negation compactly in the manner of Costales and use a minus sign as a single character for negation.
29. **Regarding dependent claim 13**, Jaakkola discloses on page 8 that one may use the ‘__’ linking keyword in sgrep to provide functionality such that by using the ‘in’ keyword, it will work as for an AND connector accompanying first and second element-defining names which are provided so as to sandwich said AND connector, said two element-defining names being used to determine if the element, which forms part of the element search portion and is defined by said first element-defining name, either follows or precedes the element which is defined by said second element-defining name, because ‘__’ establishes a joint region based on the two elements. Catapult, Inc., Microsoft Corporation, Jaakkola and Hahn fail to disclose that the AND connector is a single character. However, Costales, on page 236, indicates that the ampersand (&) is used in the C language to indicate bitwise AND compactly. It would have been obvious to one

of ordinary skill in the art at the time of the invention to denote the AND operator compactly in the manner of Costales and use an ampersand as a single character for AND.

30. **Regarding dependent claim 14**, Jaakkola discloses on page 8 that one may use the ‘__’ keyword in sgrep to provide functionality such that by using the ‘__’ keyword, it will work as for an AND connector wherein, if either of said first or second element-defining names sandwiching said AND connector specifies the corresponding element in the document, a match is established therebetween and the corresponding element is extracted and stored in said edit result storage.
31. **Regarding dependent claim 15**, Jaakkola discloses on page 7 that one may use the ‘equal’ keyword to retrieve only matches where both regions are matched to, which inherently involves a method wherein if a match is established in connection with only one of said first and second element-defining names, the element already stored in said edit result storage is deleted therefrom.
32. **Regarding dependent claim 16**, Jaakkola discloses on page 7 that one may use the ‘or’ keyword to provide functionality such that wherein said element edit statement contains an OR connector defined using a selected character and accompanying first and second element-defining names which are provided in a manner to sandwich said OR connector, said two element-defining names being used to determine if the element, which forms part of the element search portion and is specified by either of said first and second element-defining names, is present in the element search portion of the document, because the keyword’s function is to provide disjunctive searching. However, Catapult, Inc., Microsoft

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Corporation, Jaakkola and Hahn fail to disclose that the OR connector is a single character. However, Costales, on page 237, indicates that the vertical bar (|) is used in the C language to indicate bitwise OR compactly. It would have been obvious to one of ordinary skill in the art at the time of the invention to denote the OR operator compactly in the manner of Costales and use a vertical bar as a single character for OR.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

USPN 5,649,218 (filed 7/18/1995)—Saito

USPN 5,812,999 (filed 3/13/1996)—Tateno

USPN 5,133,052 (filed 8/4/1988)—Bier et al.

“UNIX man pages: grep”, GNU Project, 1994, Last change 11/22/1998

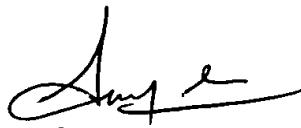
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan D. Schlaifer whose telephone number is 703-305-9777. The examiner can normally be reached on 8:30-5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Herndon can be reached on 703-308-5186. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

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JS



SANJIV SHAH
PRIMARY EXAMINER